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## "MISS NORTH'S TREE," WARREN NATIONAL PARK

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In the article on "Historic Trees," in the *Australian Encyclopaedia*, 1958, vol. 9, p. 31, is listed "Miss North's Tree," a large karri in the Warren National Park, south-west of Pemberton. Mr. B. J. Beggs, Conservator of Forests, has supplied us with some data on the tree, which is situated on high ground on the edge (south side) of the Old Vasse Road which traverses the Warren National Park on the north side of the Warren River. It is slightly over 4 km west of the point where the Old Vasse Road leaves the Northcliffe Road near Warren House, the old Brockman homestead. Mr. Beggs adds that the tree "has a height of 55 metres with a girth measurement of 5.6 metres. At a height of about 12 metres a large burl or 'niggerhead' completely rings the bole. The tree is overmature with decadent crown and has many epicormic limbs for the full length of the bole. There is a weathered plaque at the base of the tree inscribed 'Marianne North Tree'."

The tree is notable because it was painted by Miss Marianne North, the English botanical artist and traveller, when she stayed with her kinsman, Edward Reveley Brockman (1838-1902), at Warren House, near Pemberton, in December 1880 (*Recollections of a Happy Life*, 1892, vol. 2, pp. 164-166). She does not actually mention this particular tree in the book, though she was vastly impressed with the large size of the trees in this magnificent forest, where, on one occasion, "I spent four delightful hours sketching or resting under these gigantic white pillars, which were far more imposing than the trees of Fernshaw" (the Mountain Ash in Victoria).

Her painting of the tree hangs in the North Gallery at the Royal Botanic Gardens, Kew, a building she had erected at her own expense to house her considerable collection of botanical paintings. It was opened to the public in 1882. The *Official Guide to the North Gallery*, 6th edn., 1914, p. 121, no. 782, has the following description, by Miss North herself: "*Karri Gums, near the Warren River, West Australia*. Casuarinas and Emus in the foreground. The Karri Gum trees (*Eucalyptus diversicolor*, F. Muell.) are among the tallest trees in the world. Baron Mueller states that he has seen many of them that approached 400 feet in height\*. One of those painted has a monstrous ring of warts around the trunk, reminding one of the columns of Milan Cathedral, the trunks being as white and polished as the pillars themselves."

The painting is about 12 x 18 in. In the foreground are casuarinas (which must be *Casuarina decussata*) and emus, on the track or a clearing. There are also bracken, zamia palms and *Leucopogon verticillatus*.

\*Actually neither the Karri nor the Mountain Ash (*Eucalyptus regnans*) have been proved to reach this height; the Karri approaches 300 feet, and the tallest known Mountain Ash was 375 feet.

See Fig. 1. Perhaps travelling Western Australians are more familiar with this painting than with the actual tree itself. We ourselves have not yet seen the tree but have viewed the painting on a number of occasions.

Though knowledge of the tree is not widely disseminated among people in Western Australia descendants of E. R. Broekman are familiar with it. Mrs. Julius Broekman, of Busselton, who has ridden past the tree years ago when taking cattle to the coast, informs us that travellers would pass the tree on their way to or from the Vasse, and it would be





a point of conversation. Her own opinion is that it was a favourite landmark and picnic spot for the Brockman family of the Warren. Mr. Brockman says that there used to be a post and rail fence around the tree. This has now vanished. There exists another painting of this tree. It was painted for Edward and Capel Broekman by their brother-in-law, Henry C. Prinsep, and used to hang for years in the drawing room of "Beachgrove", a Brockman home in Ford Road, Busselton, now the residence of Mr. and Mrs. Julius Brockman. The painting, however, is now in the possession of a grand-daughter of the original E. R. Broekman.

One member of the Western Australian Naturalists' Club who has recently been to the tree is Mrs. Helen Wilson of Pingelly who took a photograph of it in November 1971 (Fig. 2). She had seen a reproduction of the painting at the Pemberton Tourist Bureau. There appears to be no substantial difference in the appearance of the tree since it was painted over 90 years ago.

Marianne North (1830-1890) was one of those formidable upper middleclass Englishwomen (Daisy Bates was another) who, because of their social status and personality, successfully travelled alone through little-known parts of the world, often under incredibly primitive conditions, indulging their interests and hobbies. She was a member of a family prominent in English affairs in the 17th and 18th centuries, one member of which, Frederick, Lord North (second Earl of Guilford) was Prime Minister during the American War of Independence. Marianne was descended from Dudley, 4th Lord North, through his youngest son, Roger, the historian and Attorney-General under James II. Her father, Fredrick North, was M.P. for Hastings, and in his company she began that lengthy series of journeys, starting in 1865, to Syria and Egypt, and continued after his death to most parts of the world until 1885, to Chile. "She scoured the globe for spectacular plants which she painstakingly recorded in oils in their natural surroundings" (Wilfrid Blunt, *The Art of Botanical Illustration*, 1950).

At the suggestion of Charles Darwin she visited Australia and New Zealand, commencing her Australian tour at Thursday Island in July 1880, and after travelling through Queensland, New South Wales, Victoria, Western Australia and Tasmania (by Cobb & Co. coach, horse drays, train and ship) she left for New Zealand in February 1881. A lively, and on the whole kindly, account of her Australian experiences is given in volume 2 of her autobiographical *Recollections of a Happy Life*, London, 1892. In the fashion of the age she wrote uninhibitedly, sometimes with embarrassing frankness, of her impressions of places, social customs and people—the latter being thinly disguised under their initials. In a second impression of the book some of the more outspoken passages are replaced by more innoeous matter.

The following referenees to publications on Marianne North may be of interest:

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## THE BREEDING BURROW OF THE BANDED ANT-EATER OR NUMBAT (*MYRMECOBIUS FASCIATUS*)

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Despite the Numbat's recent elevation to fame as our State's fauna emblem, little work has been done on this interesting marsupial and many aspects of its habits and life history remain relatively unknown.

For example the question of whether or not Numbats dig burrows has not been definitely resolved. Troughton (1967) states, "It is not a burrower", but Calaby (1960) says: "There is anecdotal evidence that the female digs a burrow during the breeding season". He goes on to cite John Gilbert's notebook, published by Whittell (1954). Gilbert records that it breeds "in holes or short burrows". Shortridge (1910) was told by Aborigines that during the breeding season the female makes "a rather shallow perpendicular hole in the ground". Mr. L. Glauert, former Director of the W.A. Museum, wrote in his copy of Wood Jones (1923) (now in the Museum library) that a correspondent, Mr. E. C. Cecil Dival "surprised a Numbat which made for a hole in the ground. It was a burrow about three feet long at the end of which was a nest made of straw and bits of newspaper". Glauert (1935) wrote that another correspondent, Miss E. Wills, found a litter in a burrow. Her dog began barking at a small hole which she dug out. After digging along for about three feet "the tunnel suddenly widened from two inches into a large nesting place about nine inches in diameter, lined all around with fine dead silver grass". In the nest were three young Numbats, and a further one of the same size was found in a nearby log.

Ride (1970) sums up the situation in the following words: "There is good evidence that the female Numbat digs a burrow and on several occasions young have been found in nests at the end of these short breeding burrows".

However since no detailed description of a breeding-burrow seems to have been published the question remains to some extent unresolved.

In view of this it seems appropriate to record in some detail a description of what I am quite convinced was a Numbat's breeding burrow.

On 1st May, 1974 a female Numbat was brought to me by Rod Simons, an officer of the Forests Department. He had obtained it from a forestry gang who had captured it whilst clearing a track off the Boyup/Cranbrook road. The site is located approximately 8 miles south-east of Heartlea and within the Forests Department's Perup River fauna priority area.

The Numbat had been surprised by them in the morning and had darted into a burrow located close to the track and on the other side of a large jarrah log. They dug out the burrow and located the Numbat in a chamber at the end of a short tunnel. It was a female with four young (approximately 20 mm long) attached firmly to the teats.

The area where the burrow was found is on a ridge. The forest type is predominantly jarrah (*Eucalyptus marginata*) with scattered red gums or marri (*E. calophylla*). The canopy is between 50 to 70 ft. The area has been logged and a scattered understorey of 15 to 30 ft. jarrah and marri saplings are also present. Other understorey trees present in the area include bull banksia (*Banksia grandis*) and snotty gobbler (*Persoonia longifolia*). The understorey scrub is relatively sparse giving approximately 30 to 40 percent ground cover. The dominant species is *Bossiaea ornata* with other species such as *Hakea lissocarpa*, *Leucopogon verticillatus* and zamia palms also present. The area was last burnt four years ago.

The soil in which the burrow was located is a very gravelly greyish yellow sand, containing lateritic pebbles varying in size from very small to over one inch in diameter.

Part of the burrow had been dug out during the capture of the

Numbat, but the burrow entrance and part of the tunnel which passed under a log was still intact. From the appearance of the spoil at the entrance to the burrow it was judged to have been dug out no more than a week or two previously.

It was possible to trace the outline of the remainder of the burrow and the nesting chamber and so to reconstruct their dimensions, direction and depth in considerable detail (see Figs. 1 and 2).

Fig 1. - Burrow as viewed from above.

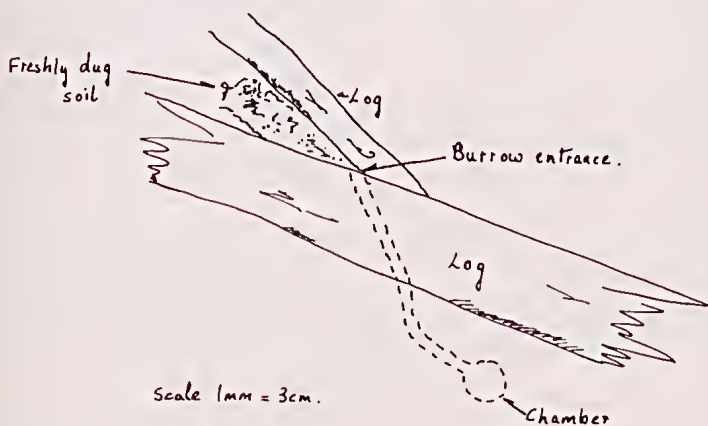


Fig 2. - Burrow as viewed in cross section



The floor of the nesting chamber was lined somewhat sparsely with dry jarrah and marri leaves, apparently obtained in the vicinity of the burrow.

There seems no reason to doubt that this burrow was in fact dug by the Numbat herself. The fact that the dimensions seem to fit the Numbat's size so perfectly, and it was obviously freshly dug, combined



with the fact that the Numbat took refuge in it when disturbed, seems to point to this. It may also be of interest to note that in the short time whilst she remained captive before she was released she exhibited considerable digging skills whilst attempting to escape by digging into the soil in the corner of her cage.

An examination of the location and structure of the burrow also reveals that it is no casual digging. If the diagrams of the burrow's location and structure are examined it is evident that a considerable amount of attention has been given to the siting of the entrance and to the structure of the burrow itself. Any animal attempting to dig it out such as a dog or a fox would find it a difficult, if not impossible task. The entrance is so located as to leave the minimal amount of space for any large animal to dig. The fact that the first 30 inches of the tunnel are close up against the underside of the log would also contribute towards making it difficult to dig out.

The young would have been approximately 1 month old (Calaby, 1960). It appears that the female Numbat may dig a breeding burrow at about this time in preparation for the time when the young become too large for her to carry. The Numbat has no pouch, the young are simply attached to the teats and cling to the long fur on the underside of the mother.

The breeding-burrow, however, as a depositing place for the young fills the gap between when the young are too large for the mother to carry but still too small to accompany her on foraging expeditions.

Another almost identical empty burrow, believed to be a Numbat's, has since been discovered in a similar location. This one was liberally lined with bark from a nearby paperbark, *Melaleuca parviflora*.

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#### WATERFOWL SEEN AT LAKE CLAREMONT (BUTLER'S SWAMP) IN THE SPRINGS OF 1972 and 1974

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In view of the continuing decrease in the quantity and quality of wetlands on the Swan Coastal Plain, summarized by Seddon (1972), and the sensitivity of birds to environmental effects, it would seem desirable to publish periodically lists of birds observed on representative lakes and swamps. In this way the interested public may be able to keep informed of the position. In late 1972, and again in spring 1974 the water birds

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